THREAT AGENT DEFEAT MODELING AND TESTING USING WMD SIMULANTS

An Overview Of Research Withing The Materials Science In Extreme Environments University Research Alliance

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This presentation reviews basic research related to the prompt defeat of chem-agents that is conducted within the Materials Science in Extreme Environments University Research Alliance (MSEE URA). Funded by DTRA, the URA includes 17 academic, industry, and DoD/national laboratory partners across the United States, and it focuses on understanding and optimizing the thermal and chemical defeat of simulants at both low and high temperatures. We seek to identify, understand, and control the relevant decomposition reactions and their kinetics and to develop reactive materials that are more effective at neutralizing chem-agents. We leverage experimental tools such as novel spectroscopy methods and computational methods for simulating the physical properties and defeat of simulants. In addition, we seek to translate new materials, novel techniques, and validated models to applied research groups in DOD and corporate settings. An overview of these activities will be presented.